

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

STODGE, INC. D/B/A POSTSCRIPT

Petitioner,

v.

ATTENTIVE MOBILE INC.

Patent Owner.

Case IPR2023-01338

Patent No. 11,416,887

**DECLARATION OF SAM MALEK, Ph.D.
IN SUPPORT OF PATENT OWNER'S PRELIMINARY RESPONSE**

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EXHIBIT LIST

Exhibit	Description
2001	Declaration Of Sam Malek, Ph.D.
2002	<i>Curriculum Vitae</i> of Sam Malek, Ph.D.
2003	Lex Machina, Motion Metrics Report for 543 orders issued by Magistrate Judge Christopher J Burke (CJB)
2004	<i>Attentive Mobile Inc., v. 317 Labs, Inc. d/b/a Emotive</i> , Case No. 1:22-cv-01163-CJB, Scheduling Order, Dkt. 29 (D. Del. Feb. 24, 2023)
2005	<i>Attentive Mobile Inc., v. Stodge Inc., d/b/a/ Postscript</i> , Case No. 1:23-cv-00087-CJB, Defendant Stodge Inc., d/b/a Postscript's Amended Answer and Counterclaims to Plaintiff's Complaint for Patent Infringement, Dkt. 50 (D. Del. Aug. 25, 2023)
2006	<i>Attentive Mobile Inc., v. Stodge Inc., d/b/a/ Postscript</i> , Case No. 1:23-cv-00087-CJB, Stipulation and Order Amending Schedule For Patent Infringement Counterclaim, Dkt. 74 (D. Del. Oct. 19, 2023)
2007	Lex Machina, U.S. District Court for the District of Delaware, cases between 2013-11-01 and 2023-11-07
2008	<i>Attentive Mobile Inc., v. Stodge Inc., d/b/a/ Postscript</i> , Case No. 1:23-cv-00087-CJB, Scheduling Order, Dkt. 20 (D. Del. Mar. 28, 2023)
2009	<i>Attentive Mobile Inc., v. 317 Labs, Inc. d/b/a Emotive et al.</i> , Case No. 1:22-cv-01163-CJB, Stipulation and [Proposed] Order to Modify Rule 16 Scheduling Order, Dkt. 52 (D. Del. Aug. 31, 2023)
2010	<i>Attentive Mobile Inc., v. Stodge Inc., d/b/a/ Postscript</i> , Case No. 1:23-cv-00087-CJB, Stodge Inc. d/b/a/ Postscript's Initial Invalidity Contentions (D. Del. July 27, 2023)

Exhibit	Description
2011	<i>Attentive Mobile Inc., v. 317 Labs, Inc. d/b/a Emotive</i> , Case No. 1:22-cv-01163-CJB, Defendant’s Initial Invalidity Contentions (D. Del. June 28, 2023)
2012	<i>Attentive Mobile Inc., v. 317 Labs, Inc. d/b/a Emotive et al.</i> , Case No. 1:22-cv-01163-CJB, Joint Claim Construction, Dkt. 66 (D. Del. Oct. 13, 2023)
2013	Press Release PR Newswire, <i>Attentive Co-Founder & CEO, Brian Long, Recognized as DMN 2019 40UNDER40 Award, Winner</i> (Aug. 6, 2019), https://markets.businessinsider.com/news/stocks/attentive-co-founder-ceo-brian-long-recognized-as-a-dmn-2019-40under40-award-winner-1028421503
2014	Sacra.com, <i>Attentive is a marketing tool for mobile messaging</i> , https://sacra.com/c/attentive/
2015	Eric Lambert, <i>Demystifying Text Marketing, Text-Based Support and “Double Opt-In”</i> , https://www.linkedin.com/pulse/demystifying-text-marketing-text-based-support-double-eric-lambert
2016	Michael Scheiner, <i>Attentive Gets the Message Out</i> (Feb. 27, 2020); https://crm.org/news/attentive-gets-the-message-out
2017	Patrice Hendriksen, <i>Attentive’s Compliance Features and Two-Tap Validated by Florida Federal Court</i> (Sept. 16, 2022), https://www.attentive.com/blog/attentives-compliance-florida-federal-court
2018	Abby Miller, <i>“DMN 2018 Award Winners”</i> (Jan. 25, 2019); https://www.dmnews.com/dmn-2018-award-winners/
2019	2021 Glossy Awards, <i>Best Use of SMS, Attentive and Supergoop!</i>
2020	The Tech Tribune, <i>2023 Best Tech Startups in NYC</i> , https://the-techtribune.com/10-best-tech-startups-in-nyc/

Exhibit	Description
2021	Attentive Reviews & Product Details, https://www.g2.com/products/attentive/reviews
2022	Business Wire, <i>Attentive Ranks #6 World's Best Software for 2023</i> , (Sept. 27, 2023); https://www.business-wire.com/news/home/20230927658818/en/Attentive-Ranks-6-World%E2%80%99s-Best-Software-for-2023
2023	PRNewswire, <i>Attentive Ranked #8 on LinkedIn's 2020 Top Startups List in the United States</i> , (Sept. 22, 2020)
2024	The Cloud 100 (Aug. 8, 2023); https://www.forbes.com/lists/cloud100/?sh=6a9a510e7d9c
2025	G2 Fastest Growing Products for 2022, https://www.g2.com/best-software-companies/2022/fastest-growing?rank=23
2026	<i>Attentive's 2022 Year to Date</i> , https://www.attentive.com/year-to-date-2022
2027	BusinessWire, <i>Attentive Named to the 2023 Deloitte Technology Fast 500™</i> (Nov. 8, 2023); https://www.business-wire.com/news/home/20231108028698/en/Attentive-Named-to-the-2023-Deloitte-Technology-Fast-500%E2%84%A2?blaid=5291542
2028	Forbes, <i>Buying Soap Was Just the Start, Now The Company Wants to Text You, Too</i> (Apr. 29, 2022); https://www.forbes.com/sites/laurendebter/2022/04/29/buying-soap-was-just-the-start-now-the-company-wants-to-text-you-too/?sh=2f7416521073
2029	Attentive, <i>Convert visitors into subscribers</i> ; https://www.attentive.com/growth
2030	Patent information for Attentive Mobile Inc., https://www.attentive.com/legal/patents

Exhibit	Description
2031	Attentive Debuts Signature "Two-Tap" Sign-Up Technology Within Instagram Stories; https://www.attentive.com/blog/attentive-instagram-stories
2032	Why SMS Marketing is The Way of The Future (plus, a spotlight on our friends at attentive®); https://www.sama-labs.com/why-sms-marketing-is-the-way-of-the-future-plus-a-spotlight-on-our-friends-at-attentive/
2033	Barry Levine, <i>Led by TapCommerce founders, startup Attentive launches SMS/MMS marketing platform</i> ; https://martech.org/led-tapcommerce-founders-startup-attentive-launches-smsmms-marketing-platform/
2034	Weetech Solution, <i>TapCommerce's founders are back with Attentive, a messaging startup that's raised \$13M</i> (Apr. 27, 2022); https://www.weetechsolution.com/blog/tapcommerce-founders-are-back-with-attentive
2035	U.S. Patent 10,366,400, <i>Reducing Un-Subscription Rates for Electronic Marketing Communications</i> , to Stephane Moreau et al., issued July 30, 2019
2036	U.S. Patent Appl., 2016/0140627 A1, <i>Generating High Quality Leads For Marketing Campaigns</i> , to Stephanie Moreau, et al., issued May 19, 2016
2037	Attentive, <i>Rethinking messaging-based customer communications</i>
2038	Attentive, <i>Text Message Marketing</i> , https://info.attentive.com/10x-revenue-email-marketing/

I, Sam Malek, Ph.D., declare as follows:

1. I have been engaged by King & Spalding LLP on behalf of Attentive Mobile Inc. (“Patent Owner”), to provide this Declaration concerning the technical subject matter relevant to the petition for *Inter Partes* Review (“Petition”) of U.S. Patent 11,416,887 (“the ’887 patent”).

2. I am over 18 years of age. I have personal knowledge of the facts stated in this Declaration and could testify competently to them if asked to do so.

3. I have reviewed and am familiar with the specification and the claims of the ’887 patent. In general, I will cite to the specification of a United States patent using the following formats: (Exhibit No. Col:Line Number(s)) or (Exhibit No. Paragraph Number(s)). For example, the citation (EX1001 1:1–10) points to the ’887 patent specification at column 1, lines 1–10. Also, for convenience, I use italics to denote limitations from the challenged claims.

4. All the opinions in this Declaration are based on the documents I reviewed and my knowledge, experience, training and professional judgment. In forming the opinions expressed in this Declaration, I reviewed the Petition for *Inter Partes* Review of U.S. Patent No. 11,416,887 and supporting exhibits.

5. I have been asked to provide my technical opinions regarding how a person of ordinary skill in the art would have understood the claims of the ’887 patent at the time of the alleged invention. I have also been asked to provide my

technical opinions on how concepts in the '887 patent specification relate to claim limitations of the '887 patent. In reaching the opinions provided herein, I have considered the '887 patent, its prosecution history, and the references cited herein and have drawn as appropriate on my own education, training, research, knowledge, and personal and professional experience.

I. QUALIFICATIONS

6. In formulating my opinions, I have relied on my knowledge, training, and experience in the relevant field, which I will summarize briefly. A more detailed summary of my background, experience, and publications is set forth in my curriculum vitae (CV), which is submitted as Exhibit 2002.

7. I have more than two decades of experience in the general area of computer and software technology in a variety of roles, including as a software engineer, software architect, and programmer at a variety of companies, as well as a researcher and professor at several universities.

8. I am currently a Full Professor of Software Engineering with tenure in the Informatics Department within the School of Information and Computer Sciences at the University of California, Irvine. I am also the Director of the Software Engineering and Analysis Laboratory ("SEAL"). My general research interests are in the field of software engineering, and to date my focus has spanned the areas of software analysis and testing, mobile computing, architecture and

design, and software dependability and security. The underlying theme of my research has been to devise techniques and tools that aid with the construction, analysis, and maintenance of largescale software systems.

9. I received my Ph.D. and M.S. degrees in Computer Science from the University of Southern California and my B.S. degree in Information and Computer Science from the University of California, Irvine. I have received numerous awards for my research contributions, including the Test of Time Award from the Association for Computing Machinery Special Interest Group on Software Engineering (2020), National Science Foundation CAREER award (2013), GMU Emerging Researcher/Scholar/Creator award (2013), and the GMU Computer Science Department Outstanding Faculty Research Award (2011).

10. I have authored over 120 peer-reviewed research publications. These publications have been highly cited (more than 10,000 times according to scholar.google.com). I have received numerous research grants from a variety of organizations, including the National Science Foundation (NSF), Federal Bureau of Investigation (FBI), Air Force Office of Scientific Research, Department of Homeland Security (DHS), National Security Agency (NSA), Defense Advanced Research Projects Agency (DARPA), Office of the Director of National Intelligence, and Army Research Office among others. Software systems and results produced in

my research lab have been adopted for use by various organizations in both private (e.g., Boeing, Bosch) and public (e.g., NASA, DHS, FBI) organizations.

11. I also have several years of experience as a software engineer, software architect, and programmer at a variety of companies, namely the Boeing Company, PricewaterhouseCoopers Consulting (later acquired by International Business Machines (“IBM”) Corporation), FieldCentrix, and Neural Computing Systems Lab. During my tenure in the industry, I gained professional experience in the design, development, and management of largescale software engineering efforts. Among the software systems that I designed and developed were commercial ecommerce and enterprise software systems. An important part of my responsibility in these projects was implementation and evaluation of security mechanisms to protect the resulting software systems from security attacks.

12. I have taught software engineering and computer science courses on a regular basis at the B.S., M.S., and Ph.D. levels at the universities where I have been employed. I have been a frequent speaker at scientific conferences, symposia, workshops, and gatherings of software engineering academics and professionals. I have served as chair, committee member, and reviewer for numerous software engineering journals, magazines, and conferences. I am currently on the editorial board of the ACM Transactions on Software Engineering and Methodology, the ACM Transactions on Autonomous and Adaptive Systems, and the Springer Journal

of Computing. I am a member of the Association for Computing Machinery (ACM), ACM Special Interest Group on Software Engineering (SIGSOFT), and the Institute of Electrical and Electronics Engineers (IEEE). I have testified at trial and deposition as an expert witness in numerous cases in the past five years.

13. My experience is highly relevant to the technologies at issue in this case and their application here. As set forth above, during my tenure in industry, I contributed to the design and development of several largescale enterprise and ecommerce software systems. For example, while working as a software engineer at FieldCentrix Computing in the late 1990s, I contributed to the development of a mobile application on Windows CE that was used by field technicians for tasks such as scheduling, dispatching, and invoicing from the field. Subsequently, while working as a software engineer at PriceWaterhouseCoopers Consulting, I participated in the development of several e-commerce applications that included web-based advertisement and marketing features.

14. My PhD dissertation and subsequent research work as a professor has highly focused on mobile application development, including methods for message-based communication. As part of my PhD dissertation, I developed a middleware called Prism-MW, which provides support for message-based (also known as event-based) communication among components comprising a Java-based mobile application. I published the results of this work in several articles, including one

entitled “Software Architecture Support for Handheld Computing”, which appeared in the IEEE Computer magazine in 2003. Since then, a significant thrust of my research at the university has been on mobile computing, from novel ways of constructing mobile apps with message-oriented communication structure to novel ways of validating their behaviors through testing. I have received numerous research grants to develop new technologies involving mobile applications. One of these grants was for a project that was funded by the Department of Homeland Security. The project aimed to validate the security implications of message-based communication among Android apps. My research group developed a novel tool, called Covert, that could effectively detect such threats through an accurate analysis of how messages generated from one app can be delivered to other apps, and ways in which such messages can be intercepted or modified by an attacker in the Android platform. The results of this work were published in a paper entitled “COVERT: Compositional Analysis of Android Inter-App Permission Leakage” in the IEEE Transactions on Software Engineering journal in 2015.

15. As part of the courses that I regularly teach at the University at both undergraduate and graduate levels, I cover topics that are directly related to the technologies at issue in this case including mobile application development, message-based communication model, deep linking techniques, and web technologies such as HTTP, URI, and JavaScript. As associate editor of several

journals and committee member of many conferences, I regularly evaluate the novelty of article submissions related to the technologies at issue in this case for publication in these venues. For instance, in the past I have been a co-organizer of several meetings of the International Workshop on Advances in Mobile App Analysis, and a program committee member of several editions of the IEEE/ACM International Conference on Mobile Software Engineering and Systems.

II. UNDERSTANDING OF RELEVANT LEGAL PRINCIPLES

16. I am not a lawyer, and I will not provide any legal opinions. Although I am not a lawyer, I have been advised certain legal standards are to be applied by technical experts in forming opinions regarding the meaning and validity of patent claims.

17. I understand that a patent claim is invalid if it is anticipated or obvious in view of the prior art, and that a claim can be unpatentable even if all of the requirements of the claim cannot be found in a single prior art reference. I further understand that invalidity of a claim requires that the claim be anticipated or obvious from the perspective of a person of ordinary skill in the art at the time the invention was made.

18. I have been informed that a patent claim is invalid if it would have been obvious to a person of ordinary skill in the art. In analyzing the obviousness of a claim, I understand the following factors may be taken into account: (1) the scope

and content of the prior art; (2) the differences between the prior art and the claims; (3) the level of ordinary skill in the art; and (4) any so called “secondary considerations” of nonobviousness if they are present.

19. I have been informed that a claim can be obvious in light of a single prior art reference or multiple prior art references. I understand that to prove that prior art or a combination of prior art renders a patent obvious, it is necessary to:

- 1) Identify the particular references that, singly or in combination, make the patent obvious;
- 2) Specifically identify which elements of the patent claim appear in each of the asserted references; and
- 3) Explain why a person of ordinary skill in the art would have combined the references, and how they would have done so, to create the inventions claimed in the patent. I further understand that exemplary rationales that may support a conclusion of obviousness include:
 - Combining prior art elements according to known methods to yield predictable results;
 - Simple substitution of known element for another to obtain predictable results;
 - Use of known technique(s) to improve similar devices (methods or products) in the same way;
 - Applying a known technique to a known device (method or product) ready for improvement to yield predictable results;

- “Obvious to try” – choosing from a finite number of identified, predictable solutions with a reasonable expectation of success;
- Known work in one field of endeavor may prompt variations of the work for use in either the same field or a different field based on design incentives or other market forces if the variations are predicable to a person of ordinary skill in the art; and
- Some teaching, suggestion, or motivation in the prior art that would have led a person of ordinary skill in the art to modify the prior art reference or to combine the prior art reference teachings to arrive at the claimed invention.

20. I have been informed that, in considering obviousness, hindsight reasoning derived from the patent-at-issue may not be used.

III. STATE OF THE PRIOR ART

21. With the advent of Internet-connected mobile electronic devices, vendors acquired new ways of engaging mobile device users. (EX-1001 1:36-39.) For example, users reading an email or viewing a website might click or tap on their mobile device and be redirected to a vendor’s application or website. (EX-1001 1:36-47.) Once there, the user could select and purchase the vendor’s products or services, as well as provide payment information to complete a transaction. (*Id.*) However, because this process required keeping the user’s attention as they navigate the application or website (i.e., by clicking or tapping the screen)—and they had

often paused their initial activity to be redirected—many users left the purchase before the transaction could be completed. (*Id.*)

22. Accordingly, an improved method for transitioning a user from one interface to another interface on a mobile device to complete, for example, a subscription, communication, and/or purchase, while still maintaining and improving a user's experience and engagement, was needed. (EX-1001, 1:48-52.)

IV. THE '887 PATENT

A. Summary Of The '887 Patent

23. The '887 patent discloses an improved technology platform and method for completing messaging-based subscriptions, communications, and/or purchases that a user initiates from a website viewed on a mobile device. (EX-1001, 2:55-65, 1:30-35, 7:59-67.)

24. The '887 patent discloses a platform implemented across a network having at least three parties: a click-to-text server, client server, and user mobile device:

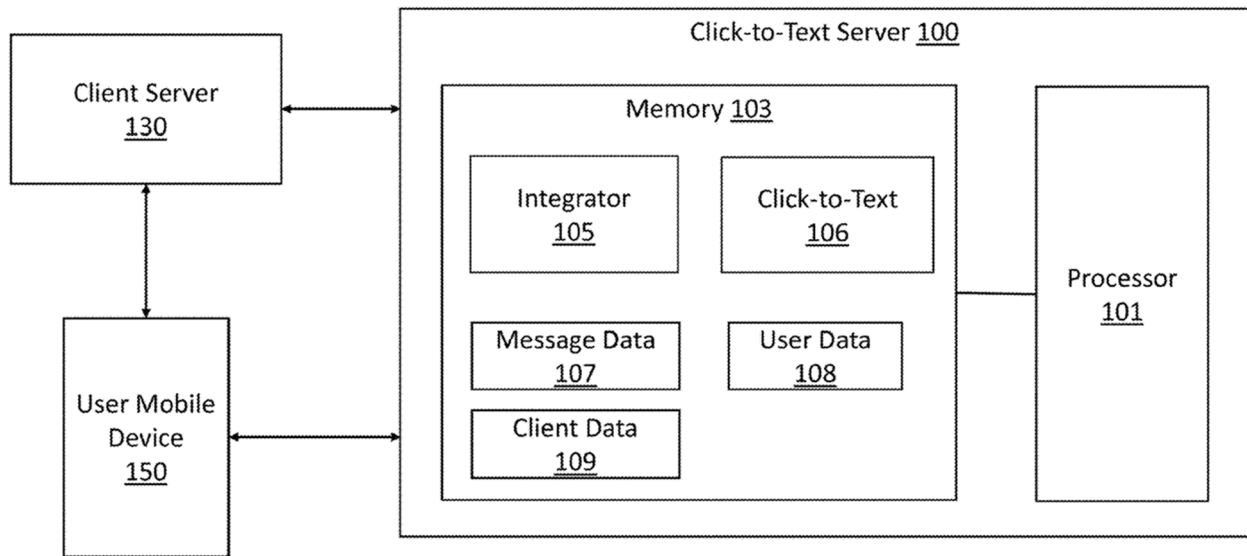


FIG. 1

(EX-1001 Fig. 1, 4:52-56.) The '887 patent describes one embodiment of a click-to-text server as a device capable of executing a “click-to-text process.” (EX-1001 5:4-46.) A client or vendor involved in Internet promotional activities serves a webpage that the user may load on their mobile device. (EX-1001 6:5-14, 6:66-7:8, cl. 1.)

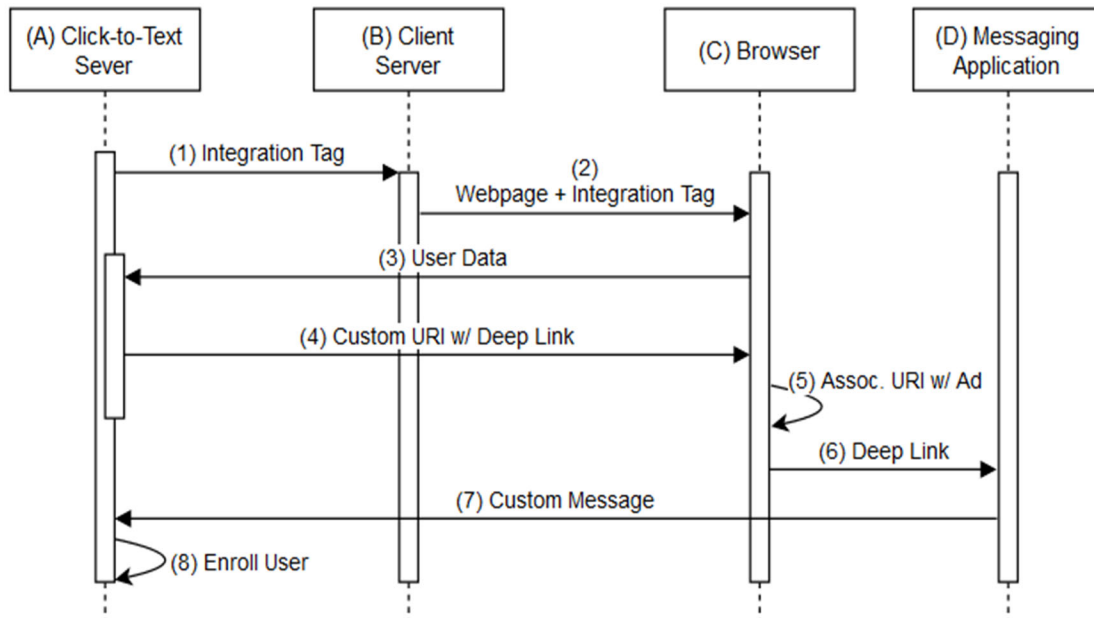
25. The click-to-text server sends the integration tag to the client server, such that the client server may serve the integration tag with its hosted webpage. (EX-1001 5:35-38, 11:59-12:14, cl. 1.) This “integration tag” may contain code representing “integrator instructions” or instructions which cause the executing device to send a request to the click-to-text server and receive the client’s promotional message. (EX-1001 5:35-42.)

26. The '887 patent teaches that when the user's mobile device loads the webpage in a mobile application, *e.g.*, a browser, and the integration tag is executed, the tag will additionally cause the mobile device to send user data to either the client server or the click-to-text server. (EX-1001 8:14-25, 12:22-32, cl. 1.) For example, a user identifier may be provided, such as a phone number, such that the click-to-text server can authenticate the user by, *e.g.*, determining whether the user is on a blacklist (to be blocked) or whitelist (permitted) associated with the client. (EX-1001 8:25-39.) The click-to-text server might alternatively or additionally be determined, based on the user identifier, whether the user is a new or existing subscriber of the client to better customize the server's response to the user. (EX-1001 8:45-60.)

27. In order to achieve improved user experience and engagement, the '887 patented invention employs several key techniques within its "two-tap" method—*i.e.*, a method in which the purchase and/or subscription process can be initiated and completed by two touch screen taps—to switch the user from, *e.g.*, a mobile website or application to a subscription or purchase message on a mobile messaging application. (EX-1001 3:3-7, 3:29-36.) In particular, the patent discloses a "custom-generated mobile deeplink." (EX-1001 3:8-23.) When the mobile device executes the integration tag, the click-to-text server defines and sends a uniform resource identifier (URI) to the mobile device, deeplinking to a messaging application

different from the first application in which the webpage is loaded. (EX-1001 cl. 1.) That is, the URI causes the device to automatically transition to a messaging application and auto-populate a custom message to the click-to-text server. (EX-1001 cl. 1, 9:4-17, 10:16-36.) The message includes both an address for the server, as well as a message body having an identifier associated with the webpage or the user data, such that when the user sends the message, the click-to-text server is able to enroll the device in a promotion without receiving any additional information from the mobile device. (EX-1001 cl. 1; *e.g., id.* 3:36-53, 9:4-17, 15:14-18.) In this way, the patented technology platform may be used to implement a “two-tap” enrollment. (EX-1001, 3:3-7 cl. 1.)

28. This process is illustrated in the sequence diagram below:



29. This dynamic application deeplinking ensures that the user's interaction with a client via a first interface continues seamlessly to a second user interface at the mobile device and facilitates a completed enrollment or purchase without the need for additional information from the mobile device. (EX-1001, 20:28-32, cl. 1.) In this way, the '887 patent improves a user's experience while shopping and interacting with a client's webpage on their mobile device and increased user engagement with the client's promotional messaging and marketing efforts. (EX-1001 20:32-37.)

30. I understand that during prosecution, the examiner specifically noted this novel improvement over the prior art. The examiner found that, while references in isolation disclosed click-to-text servers, integration tags, or deep links, "none of these, alone or if combined, teach or suggest every limitation of the claims of the present invention, and particularly the interaction of the tag and user causing an enrollment with a *de minimis* amount of information having been provided, in combination with the other elements of the claims of the present invention." (EX-1004 41.)

B. Claim Construction

31. While I am aware that Petitioner has proposed a variety of constructions in the district court claim construction briefing (EX-2012 3-13), I understand that the parties agree in this proceeding that no claim terms need be construed and that

all claim terms should carry their plain and ordinary meaning in light of the intrinsic record. (Petition 19.)

32. Consistent with that understanding, I apply the plain and ordinary meaning of all claim terms.

C. Level Of Ordinary Skill In The Art

33. I understand that certain issues relating to the validity of the '887 patent must be judged from the perspective of a person of ordinary skill in the relevant art, as I discuss below. I have been asked to define the level of a “person having ordinary skill in the art” or “POSITA” that someone would have had at the time the alleged invention as claimed was made. In deciding the level of ordinary skill, I have considered the following factors, which I have been informed are relevant in determining the level of ordinary skill in the art:

- The levels of education and experience of persons working in the field;
- The types of problems encountered in the art;
- The prior art solutions to these problems;
- The rapidity with which innovations are made; and
- The sophistication of the technology.

34. A POSITA at the time of the invention of the '887 patent (May 2017) would have had a bachelor's degree in an accredited program of computer science, computer engineering, electrical engineering, or a similar discipline, and have 2-3

years of practical work or research experience in mobile and web application programming. More advanced degrees and/or training in a related discipline can compensate for shorter work experience.

35. I understand that Petitioner has defined the level of ordinary skill in the art as:

The level of ordinary skill encompassed a person having a Bachelor's Degree in computer science and three years of experience in Web-based programming methods, where a higher level of education may substitute for experience and vice-versa.

(Petition 32.)

36. Despite minor variations in these two positions, these variations would not alter my opinions expressed in this Declaration.

37. Based on either standard, I was at least a person of ordinary skill in the art at the time of the invention of the '887 patent.

V. OVERVIEW OF PRIOR ART

A. Overview Of Haggerty

38. Haggerty discusses the importance to advertisers in finding “new ways to use a variety of media and advertising technologies to drive contact from potential customers.” (EX-1001 1:19-21.) In particular, Haggerty sought to provide a new way of using two such technologies in particular—two-dimensional barcodes displayed on a product's packaging or in, *e.g.*, a magazine advertisement, and links

embedded in electronic reading material, *e.g.*, digital books and periodicals. (EX-1007 1:27-52, cls. 1, 6.) Haggerty recognized that while these technologies had been used in the past to link to websites or electronic media, they could “furnish other capabilities that provide a more personalized response for information requests that involve, for example, accessing a call center.” (EX-1007 1:53-57.)

39. Haggerty, therefore, discloses a method for integrating 2D barcodes or links embedded in electronic reading material with a call center. (EX-1007 Title, 1:53-57, cls. 1, 6.)

40. This method involves a call center (and associated agents), a publisher of electronic reading material, and a user. (EX-1007 Fig. 2, 8:9-11.) The call center involves an “automatic call distributor” or ACD, which is a specialized switch for receiving and routing inbound calls to an available agent at a call center facility. (EX-1007 4:57-5:25.) For example, publishers may be a provider of information to a user on a subscription basis, *e.g.*, Amazon, Apple, or Barnes and Noble that routinely provide electronic versions of books, newsprint, and periodicals to electronic devices. (EX-1007 8:11-16.) Haggerty teaches that users might be “subscribers” with the publisher using proprietary reading devices, such as an Amazon Kindle device or Barnes and Nobles Nook device, or a general use device, such as an Apple iPad. (EX-1007 8:17-32.)

41. Subscribers download a particular instance of electronic reading material, which contains an embedded electronic link, to their reading device. (EX-1007, cl. 1.) When a subscriber selects the link, the advertisement “may gather additional information from the reader such as a telephone number [] the reader may be contacted at.” (EX-1007 11:7-10, 14:64-15:1.) Alternatively, the subscriber’s engagement of the link may cause a message to be sent to the publisher of the electronic reading material. (EX-1007 14:52-54.) The publisher identifies the campaign associated with the messaging, retrieves contact information on the reader from its stored subscription data, and forwards this contact information to a call center, such that the call center may initiate further contact. (EX-1007 15:5-35, cls. 1, 6.)

42. Haggerty also teaches the application of this method to 2D barcodes, *e.g.*, a quick response (QR) code. (EX-1007 9:9-11.) Haggerty discloses such codes in mailers, newspapers, magazines, billboards, etc. (EX-1007 10:7-17.) When a user scans the QR code on his or her mobile device’s camera or application, the code can indicate an action to be performed. (EX-1007 9:26-30.) The code may, for example, provide contact information, define a calendar event, indicate an email address or phone number, send a SMS message, initiate a call, etc. (EX-1007 9:26-38.)

43. After determining the calling campaign and obtaining contact information for the user, the call center may select an agent and initiate a subsequent communication to provide information on an associated good or service. (*E.g.*, EX-1007 cls. 1, 6, 13:30-35, Figs. 9-10.)

44. Figures 4A-4G illustrate the interactions between a user and the call center in various embodiments *after* the user either: (1) reads a QR code (step 402) contained in, *e.g.*, product packaging or mailers (EX-1007 Figs. 4A-4F); or (2) selects an embedded link (step 481) contained in downloaded electronic reading material. (EX-1007 Figs. 4G, 11:28-34.) The primary difference in the illustrated methods is that in the case of a user selecting an embedded link, additional communications with the publisher are necessary to identify the campaign and/or contact information of the subscriber in order to pass that information to the call center. (EX-1007 Fig. 4G, 14:50-15:29.) Although in Figure 4E Haggerty shows HTML Pages are served to the smart phone, these pages are served after the user has scanned the QR code and only for the purpose of establishing a voice call with the call center (*e.g.*, voice over IP). Haggerty does not disclose HTML pages containing advertisement content being served to mobile devices.

B. Overview Of Demsey

45. Demsey explains that ad networks typically have hundreds or thousands of partners, *i.e.*, publishers, that publish online content along with “ad

tags” provided by their partner ad network. (EX-1005 [0005].) The ad network’s ad tag on each site may access cookie data to learn more about a user’s browsing history across its network. (*Id.*) But most users access the Internet from more than one device, including a PC at home, a laptop at work, and tablets and/or mobile devices. (EX-1005 [0007].) Existing cookies stored advertising identifiers that were specific to only a single device or browser. (EX-1005 [0007]-[0008], [0021].) Therefore, Demsey saw a need for identifying users across a variety of Internet devices and advertising based on users’ identities. (*Id.*)

46. Demsey therefore discloses a method for synchronizing user IDs across devices and browsers to support Internet-based advertising. (EX-1005 [0038], [0009].)

47. Demsey discloses an environment having publisher servers 112 (owned by publishing entities), advertiser servers 114 (owned by advertising entities), and “synchronization server systems 150.” (EX-1005 [0024].)

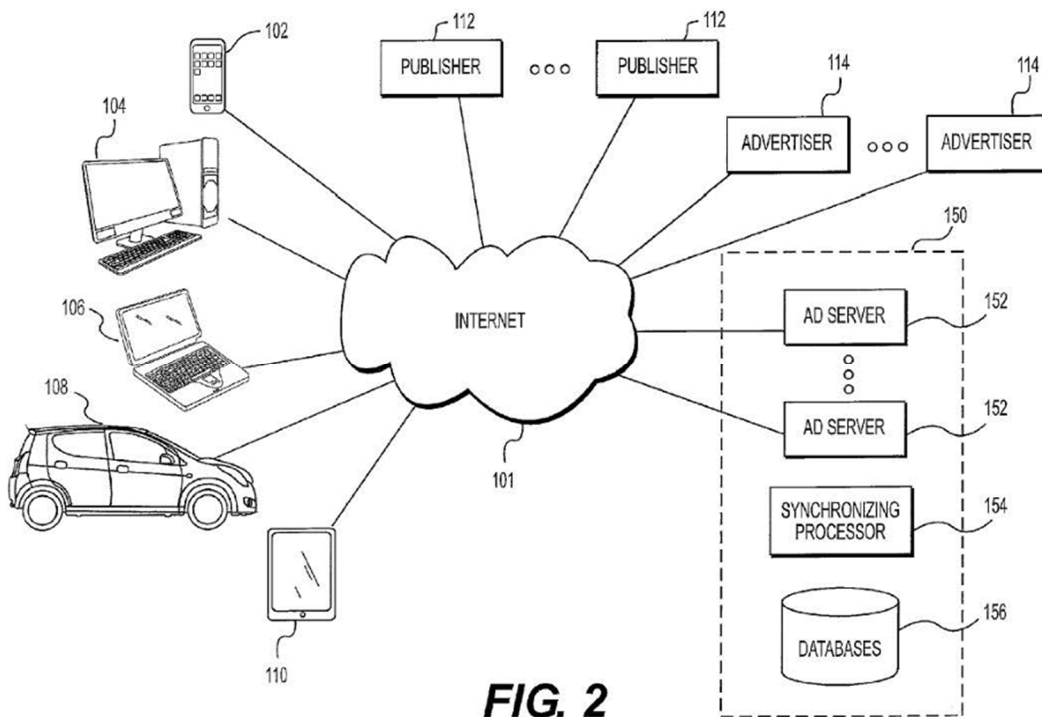


FIG. 2

Demsey describes publishers as online content providers—i.e., any online site or program having online user traffic. (EX-1005 [0026].) Advertiser servers are operated by entities having online advertising content (e.g., display ads, banner ads, pop-ups, etc.) for delivering to online users. (EX-1005 [0027].) The synchronization server systems may include a plurality of ad servers, synchronization processors, and databases. (EX-1005 [0028].)

48. Demsey's method for synchronizing user IDs across devices and browsers relies on the capabilities of modern browsers—specifically their ability to store information and synchronize that storage across browsers linked to a single user. (EX-1005 [0021].) Demsey teaches the creation of a sandboxed storage, which is registered to an advertising system or network, creating a unique identifier for the

user within the sandbox, and then using the browser's "cross-browser synchronization feature to replicate the data created within the sandbox to all of the user's connected browsers." (EX-1005 [0022], [0035]-[0036].)

49. When a user visits a webpage hosted by the publisher's server from a device, the publisher sends an ad request to an ad server that includes a unique ID assigned to the user. (EX-1005 [0039], Fig. 2.) Demographics or browsing history information that is generated from the user's use of the device is provided to an ad server and/or synchronizing server. (EX-1005 [0040].)

50. When a user subsequently uses a browser from a different device, and an ad request is received, an ad server and/or synchronizing server may lookup demographic and/or browsing history information generated from the user's use of the first device, based on the unique ID. (EX-1005 [0040]-[0042].) Based on this information, the server may determine an advertisement to display to the user during the user's use of the subsequent device. (EX-1005 [0041]-[0042].)

C. Overview Of Khanna

51. Khanna discloses a method and system for launching an application from a webpage to display a product landing page. (EX-1006, Title, Abstract, cl. 1, [0005].)

52. In particular, Khanna discloses specialized "content items"—i.e., data that can be provided over a network, such as an advertisement including a link to a

landing page. (EX-1006 [0029].) Content items can be presented within a web page or with a web page, such as in a pop-up window. (EX-1006 [0003].)

53. Khanna discloses a specialized content item, which includes “a first data element that identifies an application, a second data element that identifies a product, and a set of instructions.” (EX-1006 [0005]-[0006], cl. 1.) When a user selects the content item, the user’s device executes the set of instructions, causing the processing device to check whether the identified application is installed, transmit a request containing the first data element to a server to install the application, and launch the application with the second data element as an input, such that the first content displayed by the application relates to the product. (EX-1006 [0005]-[0006], Abstract, cl. 1.)

54. Khanna notes that publishers or advertisers may use these specialized content items to “deep-link” directly to the content within their own applications in order to create opportunities for the publisher to drive more business. (EX-1006 [0025].) Khanna defines “deep-linking” as “making a hyperlink that points to a specific content (e.g., a webpage or image) on a destination website, instead of that website’s main or home page.” (EX-1006 [0030].)

For example, an online merchant’s website may have a main or home page that welcomes visitors and helps them to find content or products of interest. A visitor may navigate to other webpages within the website that include content related to particular products. A link that directs a

user to a webpage for a particular product on the merchant's website, without viewing the main or home page, is an example of a deep-link.

(EX-1006 [0030].)

55. Khanna teaches that its method for launching an application from a webpage can be used to facilitate deep-linking—specifically, when data elements identifying a product of interest are passed to an application, such as a shopping application. (EX-1006 [0026]-[0027].) For example:

When a user selects (e.g., clicks on) the content item, if the application is installed, the application may be launched with the associated product related data elements as inputs so that the content (e.g., a landing page) related to the product is displayed in the application.

(EX-1006 [0027].)

56. The user may be presented with multiple applications that may handle the landing page for the content item's product, allowing them to select their preferred application. (EX-1006 [0063].) The user may also be presented with a single option and their permission requested to launch the application. (*Id.* (“This link is going to open Company App. Do you want to open this app? (Y/N)”).) Thus, Khanna discloses a method for launching an application from a webpage to display a product's landing page. (EX-1006, Title, Abstract, cl. 1.)

57. The '887 patent acknowledged known prior art methods similar to Khanna—*i.e.*, methods which “allow a user to open a vendor's application or a

vendor’s website on a mobile device,” where the user had the option of completing a transaction. (EX-1001 1:36-40.) The ’887 patent explains that the disadvantage of such a method is that it typically involves further user input (e.g., clicks, or screen taps) to provide information or payment and complete the transaction. (EX-1001 1:40-45.) “This time-consuming and burdensome process results in many users leaving the purchase before the transaction is complete.” (EX-1001 1:45-47.)

VI. GROUND 1 DOES NOT DISCLOSE OR RENDER OBVIOUS ALL LIMITATIONS OF CLAIM 1

58. I understand that Petitioner and its expert, Dr. Henry Houh, allege that a combination of Haggerty, Demsey, and Khanna renders obvious every limitation of the sole independent claim 1, and this allegation underlies their challenge of the remaining dependent claims under Grounds 1-4.

Ground 1	Section 103(a)	Obvious over Haggerty in view of Demsey and Khanna	Claims 1-2, and 13-14
Ground 2	Section 103(a)	Obvious over Ground 1 and Rakavy	Claims 1-4, 6-10, 13-14, and 19
Ground 3	Section 103(a)	Obvious over Ground 1 and <i>Ad Serving Technology</i>	Claims 1-2, 5, and 13-18
Ground 4	Section 103(a)	Obvious over Ground 1 and Molinet	Claims 1-2, 11-14, and 20

59. I disagree with the arguments in the Petition and the opinions set forth by Dr. Houh for at least the reasons that I discuss in further detail below.

A. A POSITA Would Not Have Been Motivated To Combine The Teachings of Haggerty, Demsey, and Khanna

60. As a preliminary matter, neither Petitioner nor Dr. Houh make clear exactly what combination of Haggerty's, Demsey's, and Khanna's teachings purportedly renders obvious the challenged claims. For example, Petitioner states in some portions of its petition that it would have been obvious to carry out Haggerty's method on Haggerty's central server using Demsey's and Khanna's techniques (Petition 28, 43-44, 46, 49-51), but states in other portions of its petition that it would have been obvious to implement Haggerty's and Khanna's teachings in one of Demsey's servers (Petition 29, 38-42, 44-45, 48).

61. Regardless, a POSITA would not have been motivated to combine the teachings of these three very different prior art references for the reasons Petitioner asserts. Dr. Houh's declaration merely repeats, word-for-word, the petition's assertions of why a POSITA would have been motivated to combine the teachings of Haggerty, Demsey, and Khanna. (*Compare* EX-1002 53-57 *with* Petition 28-32.)

62. I understand that a patent composed of several elements is not proved obvious by merely demonstrating that each of its elements was, independently, known in the prior art. I further understand that one must identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does.

63. Petitioner and Dr. Houh describe Demsey and Khanna as “intended for use with web-based advertising” and that a POSITA would have been motivated to implement Haggerty’s method using those techniques. (Petition 28-30.) But what Petitioner fails to appreciate is that Haggerty is not directed to web-based advertising.

64. Haggerty’s explicit goal was integrating either 2D barcodes (contained on product packaging or print material) or links embedded in downloaded electronic reading material with the functions of a call center to provide a more personalized response for information requests. (EX-1007 1:53-57, Title, cl. 1.) Specifically, Haggerty recognized that:

While use of 2D barcodes and links is often used for linking to web sites or other electronic media, the use of such technologies can also furnish other capabilities that provide a more personalized response for information requests that involve, for example, accessing a call center. The use of such technologies can be effective in allowing a consumer of advertising to respond immediately to an advertisement and receive information, for a variety of purposes. It is with respect to these and other considerations that the disclosure herein is presented.

(EX-1007 1:53-62.)

65. For example, based on Haggerty’s teachings, a POSITA could imagine an exemplary implementation in which a subscriber downloads a digital book to their Amazon Kindle, select a link embedded in the digital book, and is thereby connected

with the book publisher, indicating that they would like to receive a follow-up call from an agent at a call center. (*See, e.g.,* EX-1007 cl. 1; *see also* Section V(A), *supra.*) That is, unlike Demsey and/or Khanna, Haggerty’s system does not involve a webpage, a webpage-based advertisement, and/or any method that involves a user device loading web-based content in a browser.

66. The fact that the reading material disclosed in Haggerty is electronic or that it may contain a link does not necessarily mean that the link is contained within a webpage or web-based advertisement. For example, a POSITA would understand that a downloaded pdf-format document is electronic and may contain embedded links—even to a website—but the document itself is not a webpage and does not contain web-based advertisements. In contrast, the ’887 patent claims are implemented within the context of “*a webpage hosted by [a] client server*” and involve a user loading a webpage and interacting “*with a promotional message associated with the webpage.*” (EX-1001 cl. 1.)

67. Petitioner relies on Demsey for its disclosure of Internet advertisers, server-hosted webpages, and web-based advertisements. (*E.g.,* Petition 20, 24.) A POSITA would have understood Demsey’s teachings regarding cross-browser advertising ID synchronization to be specifically relevant to—and reliant on—its web-based (and browser-based) advertising environment. (*See, e.g.,* EX-1005 Figs. 3-6, [0001], [0008], [0021], Title, Abstract.) There would be no reason, therefore,

to look to Demsey’s teachings or motivation to use Demsey’s teachings to implement Haggerty’s method at Haggerty’s call center.

68. Petitioner asserts that a POSITA would have been motivated to use Demsey’s internet ad technique to increase the reach of Haggerty’s marketing efforts and “better target advertisements to particular users (as expressly taught by Demsey).” (Petition 30-31.) Petitioner does not specify which “technique,” in particular, a POSITA would allegedly incorporate from Demsey’s disclosure. But in order to obtain the benefit of Demsey’s method—i.e., better targeting of advertisements to users—a POSITA would need to implement Demsey’s cross-browser advertising ID synchronization. (*See* EX-1005 [0021], [0032]-[0033].)

69. Demsey’s method is inextricably reliant on browser-based storage. (EX-1005 [0021].) Demsey explains that:

[T]he present disclosure relates to systems and methods for leveraging modern browsers, and their attendant features of data storage, sometimes referred to as “local storage,” “browser storage,” and/or “sandboxed storage.” In particular, the present disclosure relates to systems and methods for leveraging a feature in modern browsers offering the ability to synchronize storage across browsers linked to a single user.

(EX-1005 [0021]; *see also id.* [0022].)

70. Thus, while Petitioner asserts that one would implement an unspecified technique of Demsey in order to obtain Demsey’s benefit of better targeted

advertising, Petitioner does not explain how one would use Demsey's browser-based synchronization method to improve Haggerty's browser-less method. As to allegedly increasing the reach of Haggerty's marketing "efforts," I have previously explained that Haggerty's efforts were geared towards expanding the capabilities of barcodes or embedded links in downloaded reading material. A POSITA would have no reason to implement Demsey's browser-reliant technique to improve upon this type of marketing. Any combination of Haggerty's and Demsey's disparate and unrelated teachings would require a substantial reconstruction and redesign, because Demsey is not being used for its known function of better targeting advertisements in web-based advertising in Petitioner's proposed combination.

71. Petitioner relies on Khanna for its disclosure of deeplinking from a webpage to a product landing page. (Petition 20, 26.) A POSITA would understand that Khanna's deeplinking technique is reliant on Khanna's disclosure of a specialized web-based content item. (EX-1006 Abstract, Fig. 2 (steps 202-206), [0002]-[0005].) Khanna teaches that publishers or advertisers may create content items which include "a first data element that identifies an application, a second data element that identifies a product, and a set of instructions." (EX-1006 [0005]-[0006], cl. 1.) Content items are data provided over a network, which are presented within a webpage or with a webpage, such as in a pop-up window. (EX-1006 [0003].) There would be no reason, therefore, for a POSITA to look to Khanna's

teachings or to use Khanna’s webpage-based technique in Haggerty’s webpage-less method or at Haggerty’s call center.

72. Similar to its assertions regarding Demsey, Petitioner generally asserts that a POSITA would have used Khanna’s “Internet ad technique” to increase the reach of Haggerty’s marketing efforts “and to account for conversions of deeplinks (as expressly taught by Khanna).” (Petition 30-31.) Petitioner does not specify how Khanna’s deeplinking technique—which is reliant on webpage-based content items and which redirects a user to a product landing page—would be used to improve Haggerty’s “marketing efforts.” And as I have previously explained, Haggerty’s goal was to integrate 2D barcodes and links embedded in downloaded electronic reading material with a call center in order to provide more personalized follow-up. (EX-1007 1:53-62.) A POSITA would not have looked to Khanna’s Internet ad technique to improve Haggerty’s method.

73. As for Petitioner’s purported benefit in such a combination, Khanna’s ability to track conversion information, specifically, is achieved through the web-based content item’s inclusion of a data element for version tracking. (EX-1006 [0044].) That is, one could obtain such a benefit merely by implementing the same type of web-based content item—without deeplinking to any type of application. Thus, Petitioner still has not identified any reason or alleged benefit that would

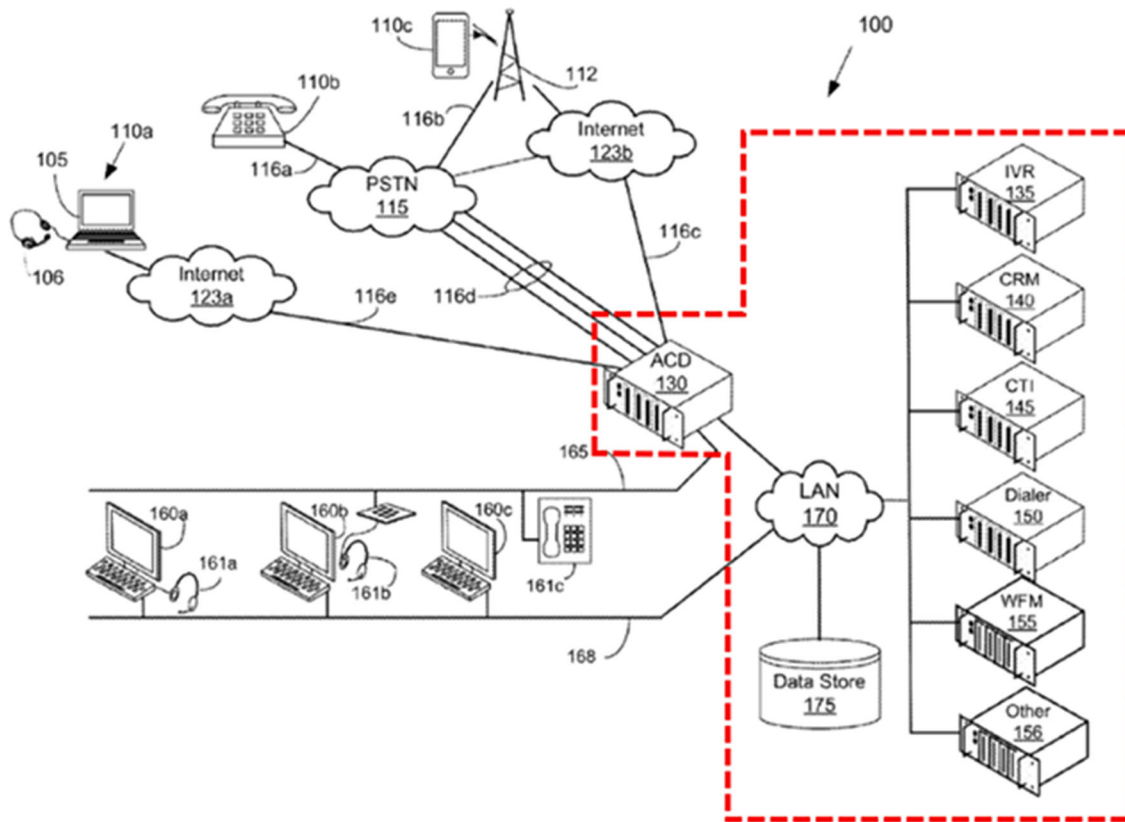
motivate a POSITA to implement Khanna's teachings regarding deeplinking—which are reliant on a web-based content item—in Haggerty's method.

74. Petitioner appears to assert that the technological similarities between Haggerty's alleged disclosure of opening a text-messaging application and Khanna's deeplinking would have motivated their combination. (Petition 30.) Even if these were similar—which they are not—their alleged similarity does not explain why one would then find it beneficial to combine or duplicate their teachings.

75. Regardless, they are not “exactly the kind of function that Khanna's deeplinks provide.” (Petition 30.) Khanna does not disclose, teach, or suggest opening a messaging application at all—rather, Khanna's technique is limited to launching an application that may be directed to product landing pages. (EX-1005 [0030].) That is, Petitioner does not rely on Khanna for its known function in its proposed combination. In fact, many of Khanna's embodiments specifically launch a vendor-specific shopping application (EX-1006 [0015], [0027], [0045]-[0046])—one of the prior art techniques criticized by the '887 patent as needing improvement. (EX-1001 1:36-47; Section V(C), *supra*.) Khanna's disclosure of a content item having a data element that specifies a particular product—i.e., in order to transfer a user to that product landing page—would serve no purpose in Haggerty's method. And Petitioner does not provide any reason or explanation of how Khanna's technique might be modified.

76. Petitioner asserts that a POSITA would simply incorporate the server-based functions disclosed by the three references into a single server merely because all three references rely on a server. (Petition 31.) This essentially amounts to a “more is better” argument that does not explain the reasons that would drive a POSITA to combine these distinct functionalities. It also fails to acknowledge the different systems in which each of the servers (including a call center) operates and the very distinct goals of each reference.

77. For example, Petitioner argues a POSITA would have implemented the references’ teachings at Haggerty’s “central server” (Petition 28); however, Haggerty does not use this term. Rather, Petitioner coins this term to refer to everything pictured in its red-annotated box:



(Petition 22.) That is, Petitioner’s reference to Haggerty’s “server” includes Haggerty’s disclosure of: an “automatic call distributor (‘ACD’)—e.g., a specialized hardware switch (EX-1007 4:57-66); a “computer-telephone integrated (CTI) server” (*id.* 5:61-64); “an interactive voice response server (‘IVR’)” (*id.* 6:27-29); a “customer relationship management (‘CRM’) server” (*id.* 6:50-54); a dialer, a software module which originates outbound calls on behalf of an agent (*id.* 6:59-7:2); a “workforce management (‘WFM’) server” which maintains information to generate call agents’ schedules (*id.* 7:21-25); a “data store” from which caller information is retriever (*id.* 6:11-17); and “other” devices connected over a local area network.

78. While Petitioner terms this collective group of hardware and software as a “central server” to supports its assertion that Haggerty’s server would be interchangeable with any other “server,” Petitioner fails to acknowledge that the majority of these components are particularly designed to support and carry out the functions of a call center. (See EX-1007 4:57-66, 5:61-7:25.) The operation and capabilities of these servers is quite distinct from those servers, for example, discussed in Demsey and Khanna. Haggerty’s server is focused on human agents at the call center, as indicated by the human icons shown for the call center in Figures 4A-G, 7A-B, and 10. Haggerty’s mention of certain software capabilities on its call center, such as web servers (See EX-1007 9:4-7), is only in reference to enabling users to contact the call center agents via email, text, or phone call. Haggerty’s call center server, which is intended to support the work of call center agents, bears no resemblance and does not share the same objective as servers in Demsey and Khanna that serve, synchronize, and track web-based advertisement.

79. Demsey also does not use the term “central server,” though Petitioner again uses this term to refer to Demsey’s “synchronization server system” in an effort to make the references appear similar. (Petition 24, 38.) Demsey’s synchronization server system includes a collection of ad servers, a synchronizing processor, and databases. (EX-1005 Fig. 2, [0024], [0028].) These servers are

designed to support the web-based advertising environment and browser-based techniques on which Demsey's method is reliant. (*See* EX-1005 [0035]-[0040].)

80. Accordingly, these methods operate across different environments, at different points of time in the advertising process, and with distinct goals—none of which Petitioner accounts for in its analysis or purported combination. Petitioner fails to acknowledge that in order to replace Haggerty's existing 2D barcodes or embedded links with web-based advertising techniques, a POSITA would have to strip Haggerty's method and system of its inventive aspect—i.e., integration of these mediums with a call center. No POSITA would have been motivated to do so.

B. No Combination of Haggerty, Demsey, and Khanna Renders Obvious A Client Server-Hosted Webpage or User Device Loading A Webpage Via A Mobile Device

81. The '887 patent recites code executed by a click-to-text server that causes the server to:

[S]end, to a client server, an integration tag configured to be served with a webpage hosted by the client server, the integration tag configured to cause a mobile device loading the webpage via a first application to send user data to at least one of the client server or the click-to-text server....

(EX-1001, cl. 1, limitation 1[b]-[c].)

82. Petitioner asserts that Demsey discloses many of the components cited within these limitations, citing Demsey's disclosure of a publisher of online content

and ad tags. (Petition 36-37.) Petitioner then asserts that a POSITA would have combined Demsey's teachings with Haggerty's call center. (Petition 38.)

83. It is my opinion that the asserted combination of Haggerty, Demsey, and Khanna does not render obvious the sole independent claim (and therefore, any claim), because it is not obvious that the combination of these references' teachings would have practiced a method using a client-server hosted webpage and because a POSITA would not have combined their teachings in such a way.

1. The asserted combination does not disclose or render obvious this limitation.

84. As I previously explained, neither Petitioner nor Dr. Houh make clear exactly what the resulting combination of Haggerty's, Demsey's, and Khanna's teachings would purportedly be and/or whether that resulting combination renders obvious the challenged claims. *See* Section VI(A), *supra*.

85. Due to the nature of Haggerty and Demsey—specifically, the environment in which each is implemented and their particular goals—there is no obvious combination of their teachings that preserves both Haggerty's method for integrating links embedded in electronic reading material with a call center and Demsey's web-based environment.

86. For example, Petitioner asserts that one would use Demsey's technique to carry out Haggerty's method “on Haggerty's central server.” (Petition 28.) As I have previously explained, Haggerty does not use the term “central server”—rather,

Petitioner coins this term to refer collectively to at least eight different servers, hardware components, and software modules that are specially designed to carry out the functions and operations of Haggerty's call center. (*See* Section VI(A), *supra*.)

87. By contrast, and as I explained in Section V(B), Demsey discloses a collection of publisher servers 112 (owned by online content providers), advertiser servers 114, and synchronization server systems 150:

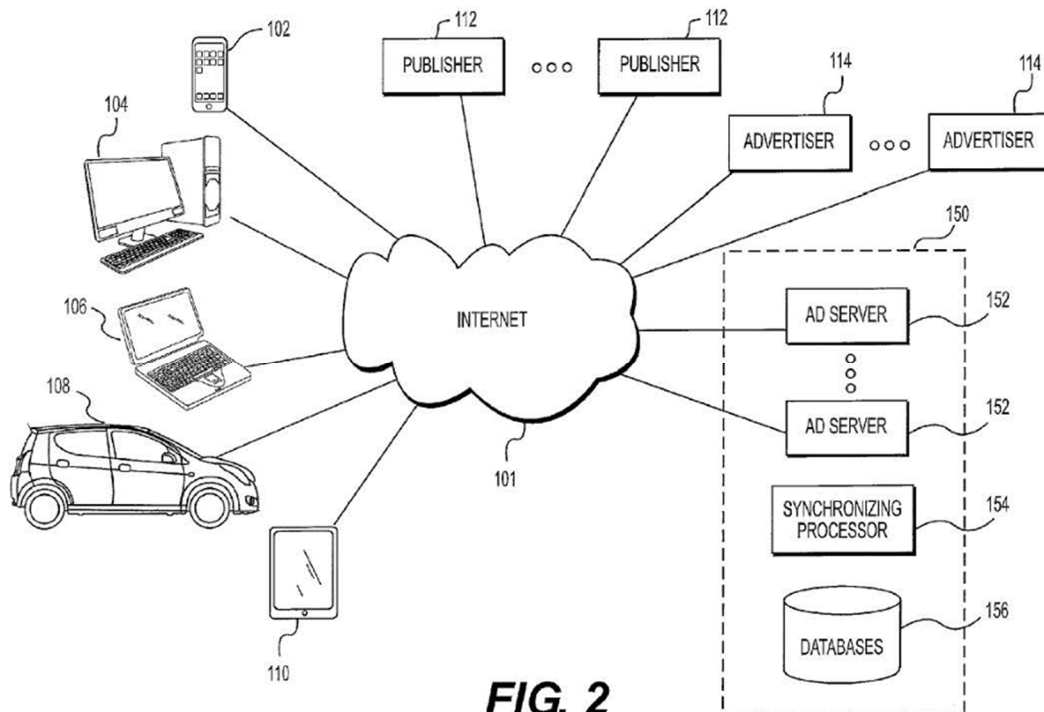


FIG. 2

(EX-1005 Fig. 2, [0024].)

88. Petitioner does not acknowledge the distinctions between Haggerty's call center and Demsey's Internet-based advertising network. It does not explain which server functions would need to be preserved in a combination of Haggerty's

and Demsey's teachings or how Haggerty's call center would implement many of the functions unique to an Internet-based advertising network while still preserving its operations as a call center.

89. For example, even if a POSITA were to modify Haggerty's call center to send out an ad tag based on Demsey's disclosure of an ad tag (as Petitioner asserts at page 38), there would be no purpose for such a modification, because Haggerty does not disclose webpage-hosting servers or web-based advertisements to which an ad tag would be relevant. (Section V(A), *supra*.) That is, due to the fundamental distinctions between Haggerty's and Demsey's methods (and the servers necessary to implement them), there is no intuitive combination of Haggerty's and Demsey's teachings in which a POSITA preserves both Haggerty's call center operations and integration method and Demsey's web-based environment.

90. While the asserted combination of teachings might disclose the sending of an ad tag, it still does not disclose or render obvious these claim limitations as a whole—i.e., *an integration tag configured to be served with a webpage hosted by the client server*, to then act on a mobile device *loading the webpage*. (EX-1001, cl. 1.)

2. A POSITA would not have been motivated to combine the teachings of Haggerty, Demsey, and Khanna to render obvious this limitation.

91. For the same reasons that a combination of Haggerty’s and Demsey’s teachings would not have been intuitive, no POSITA would have been motivated to combine their teachings to practice the patented invention.

92. Limitation [1b] (as designated by the Petitioner) recites the sending of an integration tag by a click-to-text server to a client server, the tag being configured to be served with a webpage hosted by a client server. (EX-1001 cl. 1.) Because Demsey merely teaches that the ad network “provides” publishers of online content with ad tags, Petitioner attempts to explain why it would have been obvious to have Demsey’s “central server of the ad network” send the ad tag to the publisher’s server. (Petition 38-39 (citing EX-1005 [0005]).) But even assuming Petitioner to be correct, Petitioner fails to even address why a POSITA would have then implemented such sending by Haggerty’s call center. Petitioner merely assumes in a single sentence that it was “obvious to send the integration tag by the click-to-text server [i.e., allegedly Haggerty’s call center], which in the combination performs the function of Demsey’s central server.” (Petition 38.) Petitioner does not explain *why* a POSITA would have been motivated to have Haggerty’s call center send an ad tag.

93. Limitation [1c] (as designated by Petitioner) recites the integration tag’s effect on a mobile device loading the client server’s webpage. (EX-1001 cl.

1.) With respect to this limitation, Petitioner again does not address motivation to combine at all and merely concludes, without explanation, that Demsey's ad tag would "cause a unique ID to be passed to the central server (i.e., the click-to-text server in the combination)." (Petition 40-41.) Petitioner again does not explain what why or how the ad tag would be implemented within Haggerty's call center environment or what purpose the browser-based unique ID might serve within Haggerty's browser-less system.

94. Indeed, a POSITA would not have been motivated to implement Demsey's teachings at Haggerty's call center for the reasons I previously discussed. (See Section VI(A), *supra*.)

C. No Combination of Haggerty, Demsey, and Khanna Renders Obvious A URI Deep-Linking to a Messaging Application

95. The '887 patent recites code executed by a click-to-text server that causes the server to:

[D]efine and send a uniform resource identifier (URI) to the mobile device in response to the mobile device executing the integration tag, the URI deeplinking to a messaging application different from the first application and configured to cause the mobile device to (1) automatically transition from the first application to the messaging application in response to the mobile device detecting a user interaction with a promotional message associated with the webpage, the messaging application being different from the first application, and (2) automatically populate a custom message in the messaging

application that includes an address associated with the click-to-text server and a message body that includes an identifier associated with at least one of the webpage or the user data....

(EX-1001, cl. 1, limitation 1[d]-[f].)

96. Petitioner picks and chooses disclosures from each of the three references to cobble together what it alleges to be these URI-related limitations. To demonstrate this, I have included the following table summarizing the conflicting combinations between which Petitioner alternates:

Petitioner's Limitation Labels	Claim Language	Petitioner's Cited Prior Art
[1d](a)	<i>define and send a uniform resource identifier (URI) to the mobile device in response to the mobile device executing the integration tag</i>	Applying Khanna's teachings to Demsey's system. (Petition 42-43.)
[1d](b)	<i>the URI deeplinking to a messaging application different from the first application and</i>	Applying Khanna's teachings to Haggerty's system. (Petition 43-44.)
[1e]	<i>[the URI] configured to cause the mobile device to (1) automatically transition from the first application to the messaging application in response to the mobile device detecting a user interaction with a promotional message associated with the webpage, the messaging application being different from the first application, and</i>	Applying Khanna's teachings and Haggerty's teachings to Demsey's system (Petition 44-45.)
[1f](a)	<i>[the URI...configured to...cause the mobile device to...] (2) automatically populate a custom</i>	Applying Khanna's teachings to Haggerty's system. (Petition 46.)

	<i>message in the messaging application that includes an address associated with the click-to-text server and</i>	
[1f](b)-(c)	<i>a message body that includes an identifier associated with at least one of the webpage or the user data</i>	Applying Haggerty's or Demsey's teachings to Demsey's or Haggerty's system. (Petition 47-49.)

97. First, it is my opinion that despite its cherry-picking, Petitioner still fails to identify a combination of teachings that discloses or renders obvious defining and sending a URI that deeplinks to a messaging application, causing the device to auto-transition and auto-populate a custom message. (EX-1001, limitations [1d]-[1f].) Additionally, a POSITA would not have been motivated to combine (and modify as necessary) the teachings of these references. Finally, it is not obvious that the combination of these references' teachings would have disclosed or suggested a promotional message associated with a webpage. (EX-1001, limitation [1e].)

1. The asserted combination does not disclose or render obvious defining and sending a URI that deeplinks to a messaging application.

98. None of Haggerty, Demsey, or Khanna discloses or suggests defining and sending a URI that deeplinks to a messaging application different from the first application loading a webpage. (EX-1001 cl. 1, limitations [1d]-[1f].)

99. Khanna does not disclose or suggest defining and sending a URI that deeplinks to a messaging application. As I've previously explained in detail, Khanna

discloses specialized content items, which facilitate deeplinking to a product's landing page by containing two data elements—one that specifies an application and a second that specifies a product of interest. (EX-1006 [0029], [0005], cl. 1; *see also* Section V(C), *supra*.) Khanna teaches that when a content item is selected via a user interface device (e.g., keypad, mouse, touchpad), the device is checked for the specified application and, if necessary, a request for the application may be transmitted to a remote server. (EX-1006 [0055]-[0058], Fig. 2.) The server may respond with a webpage including an offer to download the application. (EX-1006 [0059].) After the user confirms the download and installation is complete, the application is launched with the data element identifying a product as an input parameter. (EX-1006 [0061], Fig. 2.)

100. Khanna explains that this method allows publishers or advertisers to create content items that “deeplink” or “mak[e] a hyperlink that points to a specific content (e.g., a webpage or image) on a destination website, instead of that website’s main or home page.” (EX-1006 [0030]; *see also id.* [0063].) For example, when users select the specialized content item, they are redirected to the product’s landing page in a shopping application. (EX-1006 [0026]-[0027].)

101. That is, Khanna discloses a specific URL that deeplinks to a vendor’s web-based landing page for a product and contains no teachings that would suggest deeplinking to anything other than a product page. (Section V(C), *supra*; EX-1006

[0030].) Khanna does not teach or suggest a URL that deeplinks to a messaging application or which causes a device to auto-transition to a messaging application and auto-populate a custom message.

102. Furthermore, a deep link for a web page is substantially different from a deep link for a messaging application. Khanna's deep link to a web page is achieved through an http-based URL, implemented via the standard http protocol, and involves the use of web server to retrieve the referenced page. On the other hand, a deep link to a messaging application—such as that claimed by the '887 patent—is achieved through an SMS-based URL (with the precise implementation being specific to the mobile platform), and allows for the referenced application to be opened directly (i.e., without the use of a web server). A deep link to a messaging application loads a page in the messaging application for sending a message. For example, consider the following deep link for a messaging application: sms : +123 - 456 - 7891?body=Hello%20there. Here, selecting this deep link results in either a new SMS message page to be loaded for sending a message containing the words “Hello there” to phone number “123-456-7891”, or loading a page containing the device's prior communication with that phone number and appending the words “Hello there” in the conversation. Neither one of these scenarios involves retrieving a web page for a product from a web server.

103. Petitioner does not even allege that Demsey discloses or suggests defining and sending a URI that deeplinks to a messaging application different from a first application loading a webpage and, indeed, it does not. Demsey has no teachings related to transitioning away from web-based advertisements or messaging applications.

104. Petitioner also does not even allege that Haggerty discloses or suggests defining and sending a URI that deeplinks to a messaging application different from a first application loading a webpage and, indeed, it does not. As Petitioner recognizes, while Haggerty discloses transitioning from non-web-based links or QR codes to a pre-populated message, Haggerty does not disclose a *first application* loading a webpage, defining or sending a URI, or transitioning from a webpage-based promotion in a first application to the messaging application. Haggerty does not disclose by what mechanism the pre-populated message is launched.

105. While Petitioner does not even attempt to identify a motivation to combine the references' teachings, which I will address below, Petitioner concludes that it would have been obvious "to use the concepts of Demsey and Khanna to implement the business method of Haggerty, wherein the deeplinking technology of Khanna is used to open a pre-populated text message in a text messaging application." (Petition 43-44.)

106. But as none of the references teach or suggest defining and sending a URI that deeplinks to a messaging application or causing a device to auto-transition and auto-populate a custom message, it would be necessary to modify the prior art teachings to arrive at Petitioner's alleged combination.

107. For example, a POSITA would have to modify Khanna's teachings in at least two ways: applying some form of deeplinking to a non-webpage-based content item instead of Khanna's specialized content item (because Haggerty does not disclose webpage-based content) and deeplinking to a pre-populated text message in a messaging application instead of a product's web-based landing page. Petitioner does not address whether Haggerty's non-web-based content is even capable of accomplishing the same deeplinking as Khanna's specialized content item. Khanna teaches that the ability to deeplink is reliant on the data elements contained within the specialized content item. (EX-1006 [0055]-[0061].) Such data elements would need to be modified in some undetermined way to achieve a different kind of deeplink that does not redirect the user to a product-specific landing page.

108. Alternatively, a POSITA would have to drastically modify Haggerty's environment to achieve a web-based environment similar to Demsey's or Khanna's and still modify Khanna's deeplinking technique to launch a message application to

a pre-populated message instead of redirecting to a product landing page. No POSITA would be motivated to do so and Petitioner provides no analysis.

109. As none of the references disclose or suggest defining and sending a URI that deeplinks to a messaging application and causes the device to auto-transition and auto-populate a custom message, a combination of their teachings would not render obvious these limitations.

2. A POSITA would not have been motivated to combine the teachings of Haggerty, Demsey, and Khanna to render obvious this limitation.

110. Rather than address the deficiencies in the prior art or explain why or how a POSITA might have modified the prior art to arrive at the claimed invention, Petitioner merely assumes the operation of its asserted combination and/or cites its general motivation to combine. (*See, e.g.*, Petition 43-44, 45, 46-47.)

111. As I have already addressed, Petitioner's statements as to why a POSITA would be motivated to generally combine these three references are flawed and incorrect. (Section VI(A), *supra.*) In addition to the reasons I have already discussed in Section VI(A), a POSITA would specifically lack motivation to combine the references teachings in the manner Petitioner suggests for the URI-related limitations, because of the extensive modifications necessary to achieve such a result and because nothing in the prior art suggests such modifications. (Section VI(C)(1), *supra.*)

3. The asserted combination does not disclose or render obvious a promotional message associated with a webpage.

112. As I previously explained, neither Petitioner nor Dr. Houh make clear exactly what the resulting combination of Haggerty's, Demsey's, and Khanna's teachings would purportedly be and/or whether that resulting combination renders obvious the challenged claims. *See* Section VI(A), *supra*.

113. Petitioner inconsistently identifies two different promotional messages—a first is Khanna's specialized content item (Petition 44-45) and a second is Demsey's advertising link (Petition 45). Petitioner then concludes, while citing only its general description of motivation to combine, that it would have been obvious “to cause a user click on an advertising link in Demsey (i.e., a promotional message) to launch a text messaging application, as taught by Haggerty, for the reasons provided above under the section entitled ‘Rationale (Motivation) for the Combination’.” (Petition 45.)

114. It is impossible to discern from the petition whether the asserted combination of teachings is being applied in a web-based environment (like Demsey or Khanna) or within Haggerty's integration of electronic reading material and a call center. If the former, then Petitioner's assertion under this limitation conflicts with its general motivation to combine section, which asserts that one would use Demsey's and Khanna's techniques to implement Haggerty's method at Haggerty's call center. If the latter, then the resulting combination would not disclose or suggest

a promotional message associated with a webpage, because Haggerty's links and QR codes are contained in electronic reading material and printed material, respectively.

115. Accordingly, it is not obvious that the combination of these references' teachings would have disclosed or suggested a promotional message associated with a webpage. (EX-1001, limitation [1e].)

D. No Combination of Haggerty, Demsey, and Khanna Renders Obvious A Message That Includes An Identifier Associated With A Webpage or User Data

116. The '887 patent recites code executed by a click-to-text server that causes the server to:

[D]efine and send a uniform resource identifier (URI)...the URI deeplinking to a messaging application different from the first application and configured to cause the mobile device to...(2) automatically populate a custom message in the messaging application that includes...a message body that includes an identifier associated with at least one of the webpage or the user data....

(EX-1001, cl. 1, limitation 1[f].)

117. As a reminder, Petitioner relies on varying combinations of all three references as allegedly disclosing the defining and sending of a URI that would initiate a pre-populated text message "using the automatic transition and passing of data of Khanna." (Petition 46-47; Section VI(C), *supra*.) Petitioner points to several alternative prior art disclosures as allegedly disclosing "*an identifier associated with at least one of the webpage or the user data*": (1) Haggerty's teaching that the body

of the message may include a telephone number at which the reader may be reached (Petition 47); (2) Haggerty's teaching that the body of the message may include a product name or alphanumeric "campaign identifier" associated with the webpage (Petition 48-49); or (3) Demsey's disclosure of a unique device identifier (Petition 48).

118. It is my opinion that each of these arguments is flawed, such that the asserted combination of Haggerty, Demsey, and Khanna does not render obvious the sole independent claim (and therefore, any claim). Furthermore, a POSITA would not have been motivated to combine the teachings of these references to practice the claimed invention.

1. The asserted combination does not disclose or render obvious this limitation.

119. As I stated, it is my opinion that each of Petitioner's arguments as to what discloses an identifier associated with a webpage or user data is flawed, such that the combination of these references does not render obvious the challenged claims. I address each of Petitioner's alternative arguments in turn.

120. ***First***, Petitioner asserts that Haggerty discloses this limitation based on its disclosure of a message body that may include a telephone number at which the reader may be reached. (Petition 47.) However, Petitioner fails to recognize that the embodiments in which Haggerty discloses the inclusion of a telephone number require an additional step in which the user is asked for his or her telephone number

(or other information) before being able to incorporate it into the message. (EX-1007 11:4-10, 14:60-15:4.)

121. For example, when a user scans a QR code or a subscriber of electronic reading material selects an embedded link, some embodiments “may gather additional information from the reader such as a telephone number [] the reader may be contacted at.” (EX-1007 11:7-10, 14:64-15:4.) Even in other embodiments where a message is first sent to the publisher, who may already have contact information for the subscriber that can be passed to the call center, such embodiments still require additional information from the user, such as their subscriber login or authorization for the publisher to use their information. (EX-1007 14:50-15:4.)

122. That is, Haggerty does not teach causing a mobile device to “*automatically populate a custom message*” with a telephone number, upon the user selecting the advertisement. Rather, Haggerty requires gathering the telephone number from the user after he or she has selected the advertisement, before the system may generate the message. This further means that Haggerty teaches collecting additional information from the mobile device before any kind of alleged enrollment may occur, which is quite distinct from the very inventive concept of the ’887 patent. (EX-1001 cl. 1 (enrolling the device in a promotion “*without receiving any additional information from the mobile device*”).)

123. **Second**, Petitioner asserts that Haggerty discloses this limitation based on its disclosure of a message body that includes a product name or alphanumeric “campaign identifier” associated with the webpage. (Petition 48-49.) But Petitioner assumes—incorrectly—that such product name or campaign identifier is “associated with...the webpage” when it is not. (*See id.*)

124. As I have previously explained, Haggerty sought to integrate the follow-up functionality of a call center with barcodes contained in product packaging and printed material, as well as links embedded in downloaded electronic reading material—but not web-based advertisements. (Sections V(A), VI(A), *supra*; EX-1007 1:36-40, 8:9-32, 10:62-65, 17:64-67, cl. 1.) Therefore, even if Haggerty discloses a message body that identifies the product or campaign associated with the barcode or embedded link, neither is associated with a webpage. And as neither Demsey nor Khanna relate to advertisements contained in printed or downloaded electronic reading material or populating a message body, neither would suggest any modification to these steps taught by Haggerty.

125. **Third**, Petitioner asserts that Demsey discloses a unique device identifier and that it would have been obvious to incorporate this identifier in the message Haggerty discloses. (Petition 48.) But Demsey discloses a unique device identifier that is obtained via the user’s internet browser. (EX-1005 [0021]-[0022].) Specifically, Demsey discloses a way of “leveraging modern browsers, and their

attendant features of data storage” to create and store an identifier. (EX-1005 [0021].)

[I]f a user is using a browser with an automatically synchronized app-private sandboxed storage system, the disclosed methods may include creating a sandbox registered to an advertising system or network.... The method may then include creating a unique identifier for the user within the sandbox, and optionally creating an “instance” identifier for the user that is explicitly meant to be different for each device and is useful to differentiate behavior on a per device, but still linked, basis. This identifier can be based on a unique device identifier provided by many mobile devices or another globally unique (e.g., random) identifier serialized to the device. The method may then include leveraging the user’s browser’s cross-browser synchronization feature to replicate the data created within the sandbox to all of the user’s connected browsers. Accordingly, when the associated advertising system or network reads the identifier upon future requests across any of the user’s devices, the same identifier for the user may be transmitted, allowing the advertising system to address the same user across multiple devices.

(EX-1005 [0022].) In this way, Demsey discloses a means of synchronizing browser history data for a particular user across a variety of devices. (EX-1005 [0035]-[0036], [0007]-[0008].)

126. Haggerty—unlike Demsey—does not disclose a method or system that involves a user’s browser; therefore, it is unclear how the identifier would have been “already available” within Haggerty’s system. Petitioner does not explain.

Accordingly, just as I discussed with respect to Haggerty's disclosure of a telephone number, such information is not auto-populated into the message body, and Petitioner does not identify a combination of Haggerty, Demsey, and Khanna that discloses or renders obvious this limitation.

2. A POSITA would not have been motivated to combine the teachings of Haggerty, Demsey, and Khanna to render obvious this limitation.

127. Even if one of the references disclosed the claimed identifier, it would not have been obvious to a POSITA to combine the references' teachings and a POSITA would not have been motivated to do so.

128. Petitioner asserts that a user would automatically populate the custom message in Haggerty with the identifier disclosed in Haggerty or Demsey using Khanna's "method to pass such data to a target application in a deeplink." (Petition 47.)

129. But as I have previously discussed, Khanna's technique for passing data through to a target application can only be obtained through use of the specialized content item disclosed in Khanna. (Section VI(A), *supra*; EX-1006 Abstract, Fig. 2 (steps 202-206), [0002]-[0005].) That is, in order for Petitioner's assertion to succeed, it would be necessary for a POSITA to modify the advertisements disclosed in Haggerty or Demsey to implement a similar specialized content item and modify the data elements within that content item in some unspecified way to interface with

a custom message in a messaging application, rather than a product landing page. (See Section VI(C)(2), *supra*.) Accordingly, Petitioner does not rely on Khanna's technique to perform the same function it does within Khanna's method and does not, therefore, merely combine prior art elements according to known methods to yield predictable results.

130. The petition does not even articulate the resulting combination of prior art teachings, let alone acknowledge the necessary modifications to explain why a POSITA would have been motivated to make those modifications. (See Petition 46-48.) And as I have previously explained, there is no intuitive combination of the cited prior art that a POSITA would have been motivated to make, given their many differences and the unique environments in which their teachings were implemented. (Section VI(A), *supra*.)

VII. CLAIMS AND/OR LIMITATIONS NOT ADDRESSED IN THIS DECLARATION

131. It is my understanding that this declaration is being provided in support of Patent Owner's Preliminary Response. I have provided analysis of key limitations not included in the prior art. The fact that I have not analyzed particular limitations or claims in no way indicates or supports that these limitations or claims are disclosed or rendered obvious by the prior art, and I reserve the right to supplement my analysis if asked to do so.

VIII. SECONDARY OBJECTIVE INDICIA OF NONOBVIOUSNESS

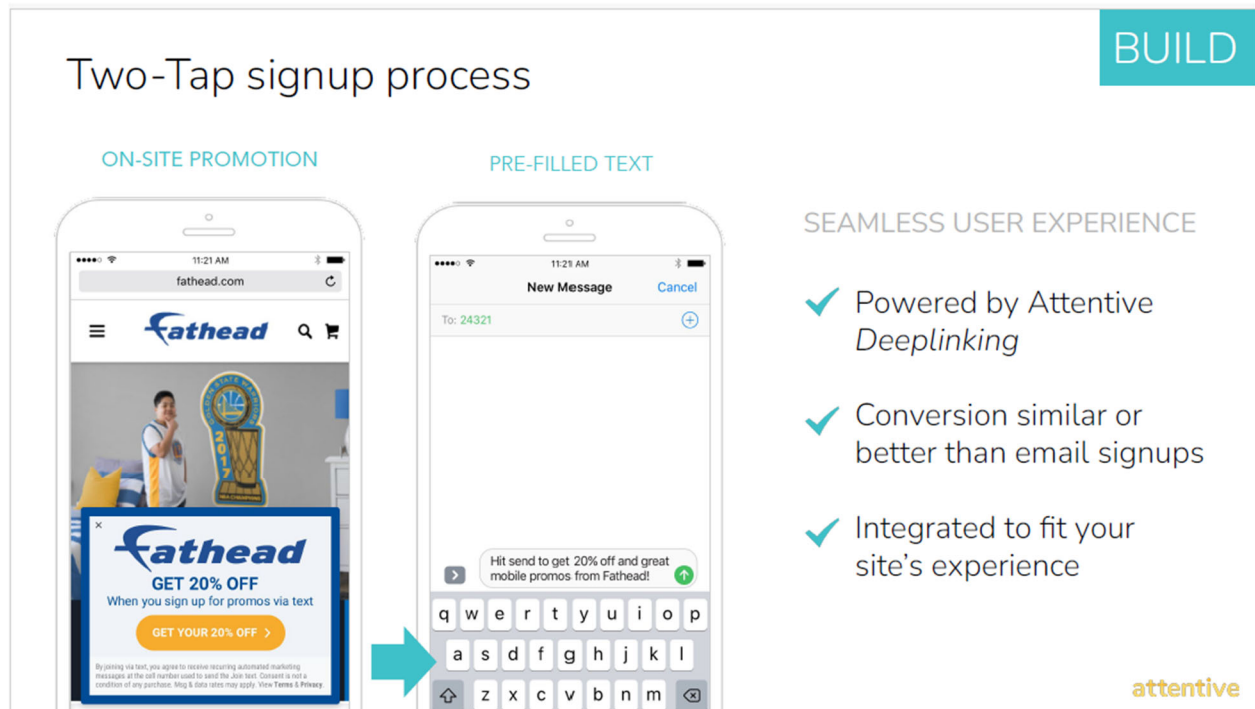
132. I understand that in determining obviousness of the claimed invention, objective evidence of secondary considerations pertaining to nonobviousness must be considered, including long-felt but unsolved needs, failure of others, commercial success, etc. I understand that such evidence is relevant where “nexus” exists—that is, where the evidence of secondary considerations is the direct result of the unique characteristics of the claimed invention. I further understand that these indicia constitute independent evidence of nonobviousness that can be the most probative evidence in that regard in avoiding the trap of hindsight when reviewing, what otherwise seems like, a combination of known elements.

133. As demonstrated by my summary of the prior art, above, there was at least a long-felt and persistent need prior to the '887 patent to improve upon prior art methods for transitioning a user from one interface to another interface on a mobile device to complete, for example, a subscription, communication, and/or purchase, while still maintaining and improving a user's experience and engagement. Prior attempts to develop such methods involved additional burden to the user in the form of “taps” or input, as well as additional time during which the user may lose interest. (*See* Section III, *supra*.)

134. Where others failed, the '887 Patent succeeded. (*See* Section IV(A), *supra*.)

135. I have reviewed the evidence cited and summarized in Patent Owner's preliminary response, which demonstrates that (1) Attentive's "two-tap" sign-up technology satisfied a long-felt need recognized in the prior art, (2) Attentive's "two-tap" sign-up technology has received significant praise in the industry, and (3) Attentive's "two-tap" sign-up technology has led to immense commercial success both for Attentive and its customers (i.e., clients who use the "two-tap" technology in conjunction with their offerings). (*See* Patent Owner's Preliminary Response, Section VII.)

136. The below image from Patent Owner's own marketing deck illustrates a user interacting with Patent Owner's "two-tap" technology platform. When a user interacts with the call-to-action button of the promotional message (e.g., "Get 20% Off"), the mobile device automatically transitions to a messaging application and automatically populates a custom message in the messaging application that includes an address and a message body. The message body further includes an identifier associated with the webpage.



(EX-2037 15.) After the user taps the send button of the messaging application, the mobile device sends the custom message, and the user is enrolled as a subscriber. (*Id.* 16-17.)

137. Specifically, the '887 patent sought to reduce “[t]he time-consuming and burdensome process”—e.g., many user clicks or screen taps—that often resulted in lost customers. (EX-1001 1:36-52.) As demonstrated by the evidence cited in Patent Owner’s preliminary response, third parties praised Patent Owner’s “two-tap” technology and attributed its success to its ability to “let[] brands minimize the path between catching a user’s interest and convincing them to agree to a regular flow of marketing texts.” (EX-2014 Patent Owner’s Preliminary Response Section VII(B)-(C).)

138. The '887 patented claims explicitly describe the benefit of being able to enroll a mobile device in a promotion based on receiving the auto-populated message “and without receiving any additional information from the mobile device.” (EX-1001, cl. 1.) And as demonstrated by the evidence cited in Patent Owner’s preliminary response, the industry recognized Patent Owner’s “two-tap” technology for its “profitable” “[s]implicity”—i.e., the ability to opt users in to begin receiving promotional messages based on nothing but the user’s tap on, e.g., a pop-up, and its pressing of a button to send a pre-populated message. (EX-2032; EX-2033; EX-2016; Patent Owner’s Preliminary Response Section VII(C).)

139. This collection of evidence relevant to secondary considerations further supports my opinion that the '887 patented invention was nonobvious.

IX. CONCLUSION

140. For at least the foregoing reasons, it is my opinion that Petitioner’s grounds do not render obvious any of the challenged claims of the '887 Patent.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code.

Executed this 28th day of November 2023 in Irvine, California.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Sam Malek", is written over a horizontal line.

Sam Malek, Ph.D.